

Amendments to the Specification:

Rewrite the paragraph at page 2, line 5, as follows. Addition of the title serves to distinguish the Background from the Summary.

SUMMARY OF THE INVENTION

The present invention provides for a WPAN that supports data rates for a variety of applications including audio, video and computer graphics. According to the invention, a probe, listen and select technique can be used advantageously to select from an available frequency spectrum a frequency band whose communication quality is suitable for communication at a desired data rate. Probe packets are transmitted on different frequencies during a known period of time, and frequency channel quality information is obtained from the probe packets. This quality information is used to select a desirable frequency band. The communication quality of the selected band can also be used as a basis for selecting from among a plurality of modulation and coding combinations that are available for use in communication operations. Further according to the invention, ARQ operations can be implemented by sending a plurality of data packets in a superpacket, and responding with an ARQ acknowledgement packet that indicates which packets of the superpacket require retransmission. Further according to the invention, a data encoding algorithm can be used to generate redundant (overhead) bits from original data bits, and the data bits and redundant bits can be sent in respectively separate transmissions, if the redundant bits are needed. At the receiver, the original data bits can be determined from the received redundant bits, or the received data bits and the received redundant bits can be combined and decoded together to produce the original data bits.